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10/798,658	03/11/2004	Ivy A. Chang	MSFT 5100 (MS#307259.01)	6313
38779	7590	06/14/2007	EXAMINER	
SENNIGER POWERS (MSFT) ONE METROPOLITAN SQUARE, 16TH FLOOR ST. LOUIS, MO 63102			RUTTEN, JAMES D	
			ART UNIT	PAPER NUMBER
			2192	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary

Application No.

10/798,658

Applicant(s)

CHANG ET AL.

Examiner

J. Derek Rutten

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-40 have been examined.

Claim Objections

2. Applicant is advised that should claims 32 and 33 be found allowable, claims 34 and 35 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-13 and 26 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Claim 1 is directed to a "system" comprising a test generator and a driver. These system components are interpreted as functional descriptive material, and the system is interpreted as being directed to software, *per se*. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory

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because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. See MPEP 2106.01. Claims 2-13 are rejected for failing to correct the deficiencies of the rejected base claim. See MPEP 2106.01.

6. Claim 26 is directed to a "data structure" comprising a URL, a path, parameters, data, and a verb. As such, the claim is interpreted as being directed to nonfunctional descriptive material. "Nonfunctional descriptive material" includes but is not limited to music, literary works, and a *compilation or mere arrangement of data*. In claim 26, the claimed "data structure" appears to be a compilation or mere arrangement of data. Note that the applicable definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993). However, the claimed "data structure" does not provide any relationship among data elements, designed to support specific data manipulation functions, and thus does not qualify as functional descriptive material. Further, merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See Diehr, 450 U.S. at 185-

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86, 209 USPQ at 8. However, if the claimed data structure was amended to support data manipulation functions, and was stored on a computer-readable medium, it could be considered statutory. See MPEP 2106.01. Note that any claim amendments must be supported by the originally filed specification.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 4, 7, 8, 16, 19, 20, 29, 32, and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 4 recites the limitation "the XML test case ... created by a user" in lines 3-4.

There is insufficient antecedent basis for this limitation in the claim. For the purpose of further examination, the limitation will be interpreted as --an XML test case--. Claim 5 contains similar limitations in line 5, and will be interpreted similarly to claim 4.

10. Claim 4 recites the limitation "identifying the configuration data" in line 5. There is insufficient antecedent basis for this limitation in the claim. For the purpose of further examination, the limitation will be interpreted as -- identifying configuration data --.

11. Claim 7 recites the limitation "the http engine" in line 9. There is insufficient antecedent basis for this limitation in the claim. For the purpose of further examination, the limitation will be interpreted as -- an http engine --.

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12. Claims 16 and 29 are similar to claim 4, and are rejected for the same reasons presented above. Claims 19 and 32 are similar to claim 7 and are rejected for the same reasons presented above. Claims 8, 20, and 33 are rejected as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

14. Claims 1-4, 12, 14-16, 23 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by “Coyote: An XML-Based Framework for Web Services Testing” by Tsai et al. (hereinafter “Tsai”).

In regard to claim 1, Tsai discloses:

A system for testing a web location including a web site or web service (see Figure 1 for an illustration of the “Coyote” system) comprising:

a test generator for generating an XML test case; See Figure 1, e.g. “Test master” Also see the top of column 1 on page 2, e.g. “XML format.” and

a driver for interpreting the XML test case into an http request to be sent to the web location. See Figure 1, e.g. “Test engine.” Also, “Soap request.” Note that SOAP is an XML based protocol to let software components and applications communicate using standard Internet HTTP, as explained by the World Wide Web Consortium in

“Introduction to SOAP” (see page 1, “What is SOAP”). As such, an http request is inherent through Tsai’s use of SOAP.

In regard to claim 2, the above rejection of claim 1 is incorporated. Tsai further discloses: *wherein said driver comprises: a parsing engine for parsing the XML test case into a sequence of requests/response pairs; and a runtime engine for providing to the web location the http request corresponding to the sequence of requests/response pairs. See Figure 1, e.g. “Test engine.”* Note that a parsing engine is inherent in converting the XML test case into the http request, otherwise the test case could not be recognized. Also see the top of column 2 on page 2, “Validating & logging.”

In regard to claim 3, the above rejection of claim 2 is incorporated. Tsai further discloses: *wherein said runtime engine receives from the web location an http response corresponding to the http request and retrieves, validates, and stores data in the http response, said retrieved, validated, and stored data being indicative of an operational status of the web location. See top of column 2 on page 2, e.g. “Validating & logging.”* Note that the use of SOAP provides an http response.

In regard to claim 4, the above rejection of claim 3 is incorporated. Tsai further discloses: *wherein the parsing engine comprises: instructions for identifying components in [an] XML test case received from the test generator or created by a user; instructions for identifying ...configuration data of the components; and instructions for replacing the*

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identified configuration data in the request to be sent to the web location to be tested.

See bottom of column 1 on page 2, e.g. “Configuration,” and “Test.” Note that the configuration “replaces” data in the request with the information from the “<testcases>” and “<scenario_path>” portion of the data structure. Further note that the identification steps are inherent since without them, no “replacing” could occur.

In regard to claim 12, the above rejection of claim 1 is incorporated. Tsai further discloses: *instructions for at least one of the following: ... supporting XML parameters ...*

See top of column 1 page 2, e.g. “XML.”

In regard to claim 14, Tsai discloses a method at least at the bottom of column 1 on page 2, e.g. “Testing engine reads the test scripts produced by test master and executes the test at the target web services...” All further limitations have been addressed in the above rejection of claim 1.

In regard to claims 15, 16, 23 and 25, the above rejection of claim 14 is incorporated. All further limitations have been addressed in the above rejection of claims 2, 4, 3 and 12, respectively.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai in view of U.S. Patent No. 6,052,730 A to Felciano et al. (hereinafter "Felciano"), in view of "Upload file via web form" by Mick (hereinafter "Mick")

In regard to claim 26, Tsai discloses:

A data structure for an XML test case for use by a driver for interpreting the XML test case into an http request to be sent to a web location including a web site or a web service, (see the top of column 1 on page 2, e.g. "the test cases are generated from the test scenarios in the XML format...") said data structure comprising elements of an http request including the following:

a URL, ... and a verb Note that these are inherent in any http request since without a url and a verb, the application would not know what to do or where to do it, and therefore would be unable to send tests to a target web service.

Tsai does not expressly disclose:

a path, query string parameters, . However, Felciano teaches that requests include paths and query string parameters. See column 3 lines 30-48, e.g. "various parameters appended to it following the path name." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Felciano's path and parameters with Tsai's http request in order to allow a client to provide input data as suggested by Felciano.

Tsai and Felciano does not expressly disclose: *post data*, However, Mick teaches that post data can be included in a post request. See bottom of page 3, e.g. “postdata.” It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Mick’s post data with Tsai’s http request in order to allow a client to provide input data as suggested by Felciano (see Felciano column 3 lines 30-48).

In regard to claim 13, the above rejection of claim 1 is incorporated. All further limitations have been addressed in the above rejection of claim 26.

17. Claims 5, 17, 36-38, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai as applied to claim 1 above, and further in view of U.S. Patent Application No. US 2003/0229503 A1 to Dan et al. (hereinafter “Dan”).

In regard to claim 5, the above rejection of claim 3 is incorporated. Tsai further discloses: *wherein the parsing engine comprises: instructions for identifying any sequence of request/response pairs in [an] XML test case received from the test generator or user input; See page 2, bottom of column 1 and top of column 2. A request must be identified before it can be configured and tested, and the corresponding response must likewise be identified before it can be validated and/or logged. ... for each simple request/response pair, instructions for identifying a data structure of the simple request/response pair; instructions for identifying aspects of the request data structure which include configuration data; and instructions for replacing the identified*

configuration data in the request to be sent to the web location to be tested and outputting the resulting sequence of request/response pairs. See bottom of column 1 on page 2, e.g. "Configuration," and "Test." Tsai does not expressly disclose: instructions for determining if each identified request is a simple request or a composite of other requests and for reducing a composite request to a plurality of simple requests;

However, Dan teaches the use of composite requests. See Dan, paragraph [0046]. Note that Dan could not apply a processing "order" without first reducing the composite request. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Dan's composite request with Tsai's request/response pairs in order to provide recovery after failure, and in a manner that does not compromise security as suggested by Dan (see paragraph [0016]).

In regard to claim 17, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claim 5.

In regard to claim 36, Tsai does not expressly disclose: *A computer readable medium (CRM) having instructions for ...a web location.* However Dan teaches this in paragraph [0063], e.g. "computer readable medium." All further limitations have been addressed in the above rejection of claim 1. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Dan's medium with Tsai's instructions in order to distribute the instructions as suggested by Dan.

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In regard to claims 37, 38, and 40, All further limitations have been addressed in the above rejection of claims 2, 3, and 12, respectively.

18. Claims 6 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai and Dan as applied to claim 5 above, and further in view of Felciano and Mick.

In regard to claim 6, the above rejection of claim 5 is incorporated. All further limitations have been addressed in the above rejection of claim 26.

In regard to claim 18, the above rejection of claim 17 is incorporated. All further limitations have been addressed in the above rejection of claim 26.

19. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai and Dan as applied to claim 5 above, and further in view of U.S. Patent No. 6,044,398 to Marullo et al. (hereinafter "Marullo").

In regard to claim 7, the above rejection of claim 5 is incorporated. Tsai further discloses: *wherein the runtime engine comprises: ...instructions for creating an http request from the data in the replaced request; instructions for instantiating an http engine; and instructions for sending the http request to the web location.* See bottom of page 2 column 2, e.g. "Configuration" and "Test". Note that each set of "instructions" is inherently provided by Tsai's disclosure of invoking a service method, otherwise the test

would not function. Tsai and Dan does not expressly disclose: *instructions for identifying dynamic data in the request/response pairs received from the parsing engine; instructions for replacing the identified dynamic data to generate a replaced request.* However, Marullo teaches that dynamic data can be identified to generate a replaced request. See column 17 lines 9-13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Marullo's test data generation with Tsai's replaced requests in order to "effect an automatic generation of Internet test data which could then be employed to exercise [a] web server application" as suggested by Marullo (see column 16 lines 57-61).

In regard to claim 8, the above rejection of claim 7 is incorporated. Tsai further discloses: *instructions for receiving from the web location an http response to the corresponding http request; instructions for identifying the location and data to be retrieved from the http response regarding the operability of the web location; and instructions for retrieving, validating, and storing the identified location and data.* See top of page 2, column 2, e.g. "Validating & logging."

20. Claims 9, 10, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai as applied to claim 2 above, and further in view of Marullo.

In regard to claims 9 and 10, the above rejection of claim 2 is incorporated. All further limitations have been addressed in the above rejection of claims 7 and 8, respectively.

In regard to claims 21 and 22, the above rejection of claim 15 is incorporated. All further limitations have been addressed in the above rejection of claims 7 and 8, respectively.

21. Claims 11 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai as applied to claim 2 above, and further in view of U.S. Patent No. 6,138,157 to Welter (hereinafter "Welter").

In regard to claim 11, the above rejection of claim 1 is incorporated. Tsai further discloses: *wherein the test case includes at least one of the following tags: ..., parameters specific to the test case* See bottom of column 1, page 2, e.g. "<testcases>". Tsai does not expressly disclose: *and retrieved from a configuration file corresponding to the web location, ...* However, Welter teaches retrieving parameters from a configuration file corresponding with a web location. See Fig. 6. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Welter's configuration file with Tsai's parameters in order to easily edit configuration parameters as suggested by Welter (see column 2 lines 34-43).

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In regard to claim 24, the above rejection of claim 14 is incorporated. All further limitations have been addressed in the above rejection of claim 11.

22. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai, Dan, Felciano and Mick as applied to claim 18 above, and further in view of Marullo.

In regard to claims 19 and 20, the above rejection of claim 18 is incorporated. All further limitations have been addressed in the above rejection of claims 7 and 8, respectively.

23. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai in view of "Microsoft's Passport to doom" by Kotadia (hereinafter "Kotadia").

In regard to claim 27, Tsai discloses a method at the bottom of column 1 on page 2, as pointed out in the above rejection of claim 14. Tsai does not expressly disclose: *a multi-site user authentication system*. However, Kotadia teaches the use of a multi-site user authentication system. See paragraph 2 on page 1, e.g. "Passport." All further limitations have been addressed in the above rejection of claim 1. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kotadia's authentication system with Tsai's method in order to provide testing for a web service platform as taught by Tsai (see paragraph 1 "Introduction").

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In regard to claims 28 and 29, the above rejection of claim 27 is incorporated. All further limitations have been addressed in the above rejection of claims 3 and 4, respectively.

24. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai and Kotadia as applied to claim 27 above, and further in view of Dan.

In regard to claim 30, the above rejection of claim 27 is incorporated. All further limitations have been addressed in the above rejection of claim 5.

25. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai, Kotadia, and Dan as applied to claim 30 above, and further in view of Felciano and Mick.

In regard to claim 31, the above rejection of claim 30 is incorporated. All further limitations have been addressed in the above rejection of claim 26.

26. Claims 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai and Kotadia as applied to claim 27 above, and further in view Marullo.

In regard to claims 32 and 34, the above rejection of claim 27 is incorporated. All further limitations have been addressed in the above rejection of claim 7.

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In regard to claims 33 and 35, the above rejection of claims 32 and 24 are incorporated. All further limitations have been addressed in the above rejection of claim 8.

27. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai and Dan as applied to claim 36 above, and further in view of Welter.

In regard to claim 39, the above rejection of claim 36 is incorporated. All further limitations have been addressed in the above rejection of claim 11.

Conclusion

28. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Derek Rutten whose telephone number is (571)272-3703. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jdr



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